

## REMARKS

### Summary of Office Action

Claims 1 - 13, 15-27 and 29-41 are pending in the case. Claims 1, 16, and 30 are independent claims. All claims were rejected by the Examiner.

The Examiner rejected Claims 1, 16, and 30 under 35 USC § 112.

The Examiner rejected Claims 13, 16-27, 29 and 30 Under 35 USC § 101.

The Examiner rejected Claims 1-6, 8-10, 13, 15-21, 23-25, 29-35, and 37-39 under 35 U.S.C. §102 (a) as being anticipated by W3C, "Web Services Description Language (WSDL) 1.1," 03/15/01, pp. 1-51, <http://www.w3.org/TR/wsdl> (hereafter "W3C 1.1").

The Examiner rejected claims 7, 12, 22, 27, 36, and 40 under 35 U.S.C. § 103(a) as obvious under W3C 1.1.

Claims 1, 13, 16 and 30 have been amended.

### 35 USC §112 REJECTION

The Examiner rejected Claims 1, 16, and 30 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner asserts that the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the Examiner states that the specification gives no indication as to what constitutes the "Is Instance" and "Is Valid" operators and what it means to "return TRUE" based on the operators as well as how this result would occur or be produced. The one to one relationship between the schema and abstract type and between the object and the XML document is set out in Par. [0061] of the specification, where applicant provides:

"Fig. 2 captures the essence of the duality achieved by TDL between Object based and XML based views. Fig. 2 illustrates that there is a one to one mapping from an abstract type 200 to a Schema type 210 and vice-versa along pathway 205 in accordance with the present invention. There is also a one to one mapping from an instance 220 to an XML document 230 and vice-versa via a SOAP serializer

235 along pathway 235. The Is Instance operator along pathway 215 between an abstract type 200 and an instance 220 returns TRUE if and only if the Is Valid operator along pathway 225 returns TRUE between the corresponding XML Schema Type and XML Document. TDL is the first interface description language that ensures that both the Is Instance operator and Is Valid operator will return TRUE.”

The XML operator IsValid that tests whether a value meets a validation or data type rule is well known to XML programmers of ordinary skill in XML programming. Take for example the Article “How to validate an XML document by using DTD, XDR, or XSD in Visual Basic” attached as Appendix A. There the definition of an IsValid operator is clearly set out..

Similarly, the method IsInstance is well known in object oriented programming using a programming language such as JAVA. The IsInstance method returns true if the object argument is an instance of the classinfo argument, or of a (direct or indirect) subclass thereof. Also return true if classinfo is a type object and object is an object of that type. If object is not a class instance or an object of the given type, the function always returns false. (see “Safe Structural Conformance for Java,” June 17, 1998, Technical Report OSU-CISRC-6/98-TR20 Computer and Information Science Department, Ohio State University. Attached as appendix B)

Claims 1, 16 and 20 have been amended. The references to the Is Instance method and Is Valid operator have been omitted. It is respectfully submitted that the claims are in conformance with 35 USC § 112.

### **35 USC §101 REJECTION**

The Examiner rejected Claims 13, 16-27,29 and 30 under 35 U.S.C. § 101. The Examiner argues that the Claims recite a computer readable medium which could merely be a transmission medium to include signals such as carrier waves (Paragraph 49; "carrier wave"). Claim 13 has been amended to recite a tangible computer readable medium. Claim 16 recites “a tangibly embodied computer readable medium” Claim 30 recites “computer-executable instructions tangibly embodied on a computer readable medium.” It is respectfully submitted

that Claims 13, 16-27, 29 and 30 all recite statutory subject matter and do not encompass carrier waves..

### **35 USC § 102 REJECTIONS**

The Examiner rejected Claims 1-6, 8-10, 12-13, 15-21,23-25,27,29-35, and 37-340 under 35 USC § 102(a) as being anticipated by W3C, "Web Services Description Language (WSDL) 1.1 ", 0311 5/01, pp. 1-5 1, <http://www.w3.org/TR/wsdl> (Hereafter W3C).

#### **In regard to Claims 1, 16, and 30**

The Examiner asserts that W3C teaches a method, computer readable medium, and device for providing interface description for a service of a device in a computing system, that provides the one to one mapping recited in the claims.

The Examiner pointed to the Abstract and pages 3-4 of W3C 1.1 as disclosing a one to one mapping. However, the only reference to mapping in the cited reference is in page 16, section 2.3.2 that provides:

#### **"2.3.2 Abstract vs. Concrete Messages**

Message definitions are always considered to be an abstract definition of the message content. A message binding describes how the abstract content is mapped into a concrete format. However, in some cases, the abstract definition may match the concrete representation very closely or exactly for one or more bindings, so those binding(s) will supply little or no mapping information. another binding of the same message definition may require extensive mapping information. For this reason, it is not until the binding is inspected that one can determine "how abstract" the message really is."

Applicants again submit that a one to one mapping as described by applicant is not disclosed in the cited references.

Claims 1, 16 and 30 as amended recites a one to one relationship between the service of the device or object to an XML document where the one to one relationship is characterized in a way that the service of the device or object is an instance of the abstract type if and only if the

XML document is valid in accordance with the XML schema. Nothing in the reference discloses or even hints at that type of relationship.

The Examiner is pints to language in the document and asserts that it means what is recited in the claims, without providing any evidence of the equivalence of the concepts. For example, the examiner equates:

Claim	Reference
creating a one to one mapping of each abstract type in the device or object to an XML schema type with	Types- a container for data type definitions using some type of system (such as XSD)" & "WSDL recognizes the need for rich type systems for describing message formats, and supports the XML schema specification.

How are the two concepts equivalent? Where is the requirement of a one to one mapping? Where is the concept of one to one mapping disclosed in the reference? What evidence is there that the cited reference accomplishes a one to one mapping?

For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. See In re Arkley, 172 U.S.P.Q. (BNA) 524 (CCPA 1971) where the court stated :

“Under 35 USC 102 are proper only when the claimed subject matter is identically disclosed or described in "the prior art." Thus, for the instant rejection under 35 USC 102(e) to have been proper, the Flynn reference must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.”

It is respectfully submitted that the Examiner has not met the burden established for a 35 USC § 102 rejection. Reconsideration and allowance of Claims 1, 16 and 30 is requested.

**In regard to Claims 2 -6, 8-10, 12-13, and 15,**

The claims are dependent from claim 1. The cited art does not anticipate the claims for the same reasons as et forth for claims 1.

**In regard to Claims 17 -21, 23-25, 27 and 29**

The claims are dependent from claim 16. The cited art does not anticipate the claims for the same reasons as et forth for claims 16.

**In regard to Claims 31-35, 37-40**

The claims are dependent from claim 30. The cited art does not anticipate the claims for the same reasons as et forth for claims 30.

**35 USC §103 REJECTIONS**

**In regard to dependent claims 7, 22, and 36**

The Examiner rejected claim 7, 22 and 36 under 35 USC §103 (a) asserting that "it would have been obvious to have supported inheritance of programming constructs, because W3C taught a TDL utilizing XML Schema, which was notoriously well known in the art at the time of the invention to provide inheritance to the typed programming constructs." Applicant disagrees. The cited reference does not mention the concept of inheritance. However, in the new version of WSDL (WSDL 2.0, working draft published 26 march 2007, Appendix C), there is significant attention paid to the concept. Among the differences between WSDL 1.1 and WSDL 2.0 is Version 2.0 of WSDL (Web Services Description Language) a new component model, interface inheritance and other changes designed to reduce complexity. This raises the question that if it was obvious, why did it take 5 years to come up with the new version. In any event, the type of mapping described in Claim 3, upon which claim 7 depends is not disclosed in the references. To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed

invention to have been obvious in light of the teachings of the references. The Examiner has not met the burden.

It is respectfully submitted that Claims 7, 22 and 36 are not rendered obvious by W3C

1.1. Reconsideration and allowance of the claims is requested.

**In regard to dependent claims 11, 26, and 41,**

The Examiner rejected Claims 11, 26 and 41 as obvious in view of W3C and Jeff Schneider, "Convergence of Peer and Web Services", 07/20/01, pp. 1-7, <http://www.openp2p.com/pub/a/p2p/2001/0720/convergence.html> ("Schneider"). The Examiner cited Schneider as teaching the eventual convergence of web services computing environment and a peer to peer environment. Respectfully, it is clear that Schneider does not teach but rather speculates about a possible convergence by means presumably to be invented in the future. Neither Schneider, nor W3C 1.1 teach the element of creating a one to one mapping of each type in the device or object to an XML schema with the relationship between the instance validation and schema type validation claimed for use in a distributed computer environment.

It is respectfully submitted that Claims 11, 26 and 41 are not rendered obvious by W3C 1.1 in combination with Schneider. Reconsideration and allowance of Claims 11, 26 and 41 is requested.

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**PATENT**

**CONCLUSION**

Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

Respectfully submitted,

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/Eduardo M. Carreras/  
Eduardo M. Carreras  
Registration No. 28,197

Woodcock Washburn LLP  
Cira Centre  
2929 Arch Street, 12th Floor  
Philadelphia, PA 19104-2891  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439